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10/791,249	03/02/2004	Michael Fiske	11-2	5568
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DAVID LEWIS 1250 AVIATION AVE., SUITE 200B SAN JOSE, CA 95110			BUSS, BENJAMIN J	
			ART UNIT	PAPER NUMBER
			2129	

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,249

Applicant(s)

FISKE, MICHAEL

Examiner

Benjamin Buss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,8-18,21,23-29,31,32 and 34-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,8-18,21,23-29,31,32 and 34-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/15/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/15/2004, 9/1/2005, 9/27/2005</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claims 1, 2, 5, 6, 8-18, 21, 23-29, 31, 32, and 34-58 are pending in this application.

Priority

- 5 Examiner acknowledges Applicant's claim for priority based on 60/456,715 filed on **3/24/2003**.

Specification

The disclosure is objected to because of the following informalities:

- page 10, line 12: Change "Refer to the diagram titled" to -- Refer to Figure 1 titled --.
- 10 - page 11, lines 11 and 17: Change "In the diagram," to -- In Figure 2, --.
- page 12, lines 9-10: Change "The diagram titled, " to -- Figure 3 titled --.
- page 13, line 22: Change "Refer to the diagram, titled" to -- Refer to Figure 4 titled --.
- page 13, line 32: Change "The schematic diagram titled" to -- The schematic in Figure 5 titled --.

Appropriate corrections are required.

15

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

- reference character "m₁" has been used to designate both a module in Machine A and a different module in Machine B (see Figure 2, Before Crossover). Examiner suggests changing the "m₁" of Machine B to "m₄" in the Before Crossover portion of Figure 2;
- 20 - reference character "m₂" has been used to designate both a module in Machine A and a different module in Machine B (see Figure 2, Before Crossover). Examiner suggests changing the "m₂" of Machine B to "m₅" in the Before Crossover portion of Figure 2;
- NOTE: "After Crossover", Machine A appears to contain what should be "m₁" and "m₅" while Machine B
- 25 appears to contain "m₄", "m₂", "m₃". Related changes to the specification are also necessary.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing

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sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

10

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

15

Claims 1-2, 5-6, 8-18, 21, 23-29, 31-32, and 34-58 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The computer system must set forth a practical application of that §101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77. The invention is ineligible because it has not been limited to a substantial practical application. The claims are directed to a mere abstraction. The "computing machine" is not necessarily hardware-based, as the specification states that "a software implementation of a static Effector machine ... able to run properly in a Windows environment" (specification p1 lines 15-19). There is no useful, concrete, and tangible result. The determination in independent claims 1 and 17 is not used in a substantial practical application. Claims that merely make a determination are useless in a real world situation. The claims are directed toward an abstract computing machine.

20

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete. If the claim is directed to a practical application of the §101 judicial exceptions producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. §101.

25

The phrases 'collection of computing elements', 'determines how the Effectors behave', and 'determines how information is transmitted' are not clear in purpose or scope.

The invention must be for a practical application and either:

1) specify transforming (physical thing – article) or

2) have the Final Result (not the steps) achieve or produce a

30

useful (specific, substantial, AND credible),

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concrete (substantially repeatable/non-unpredictable), AND

tangible (real world/non-abstract) result

(tangibility is the opposite of abstractness).

A claim that is so broad that it reads on both statutory and non-statutory subject matter must be amended, and if the specification discloses a practical application but the claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended. A claim that recites a computer that solely calculates a mathematical formula is not statutory.

Claims that merely denote the existence of a collection of objects and abstractly make determinations concerning the objects are not statutory.

The courts have also held that a claim may not preempt ideas, laws of nature or natural phenomena. The concern over preemption was expressed as early as 1852. See Le Roy v. Tatham, 55 U.S. (14 How.) 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132, 76 USPQ 280, 282 (1948).

Accordingly, one may not patent every "substantial practical application" of an idea, law of nature or natural phenomena because such a patent "in practical effect would be a patent on the [idea, law of nature or natural phenomena] itself." "Here the "process" claim is so abstract and sweeping as to cover both known and unknown uses of the BCD to pure-binary conversion. The end use may (1) vary from the operation of a train to verification of drivers' licenses to researching the law books for precedents and (2) be performed through any existing machinery or future-devised machinery or without any apparatus." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

In the present application, the computing machine of claim 1 and the method of claim 17 are so abstract and sweeping as to cover both known and unknown architectures containing computing elements, such as all neural networks, Bayesian networks, systems of cooperative agents, parallel computer systems, etc. The systems of claims 5, 47, and 48 are so abstract and sweeping as to cover both known and unknown systems capable of performing any task useful in designing a machine or a program, such as any type of computer or processing device. Therefore, the claims **PREEMPT** many practical applications, and therefore do not pass muster under 35

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U.S.C. §101. Furthermore, Examiner has read the specification looking for the disclosure of a substantial practical application and has found NONE.

Appropriate corrections are required.

5 ***Claim Rejections - 35 USC § 101***

Claims 1-2, 5-6, 8-18, 21, 23-29, 31-32, and 34-58 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility, a credible asserted utility or a well established utility. No use for the claims has been claimed or disclosed. The claims are directed merely to having a collection of elements and making abstraction determinations about the elements. There is neither a supporting specific and
10 substantial asserted utility, nor a credible asserted utility, nor a well established utility.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

15 The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 5, 6, 8-18, 21, 23-29, 31, 32, and 34-58 are rejected under 35 U.S.C. 112, first paragraph, as failing to
20 comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure describes that the claimed invention is capable of **executing computations more than four orders of magnitude faster than today's digital computers** (specification p1 last ¶) while **reducing the amount of power consumed by more than 5**
25 **orders of magnitude and producing much less heat than a digital computer** (specification p2 ¶3 and p13 last ¶ continuing on p14). Neither the claims nor the disclosure as a whole reasonably convey that Applicant had possession of a machine at the time of the invention, which when compared to today's digital computers, is capable of executing computations more than four orders of magnitude faster while consuming more than 5 orders of magnitude less power and producing less much less heat.

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Claim Rejections - 35 USC § 112

Claims 1-2, 5-6, 8-18, 21, 23-29, 31-32, and 34-58 are also rejected under 35 U.S.C. 112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a 101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way

5 Applicant could have disclosed how to practice the undisclosed practical application. This is how the MPEP puts it:

("The how to use prong of section 112 **incorporates as a matter of law** the requirement of 35 U.S.C. §101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. §101, then the application **also fails as a matter of law** to enable one of ordinary skill in the art to use the invention under 35 U.S.C. §112."); In re Kirk, '376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) ("Necessarily, compliance with §112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention.**"). See, MPEP §2107.01 (IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-2, 5-6, 8-18, 21, 23-29, 31-32, and 34-58 are rejected on this basis.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

20 Claims 5, 8, 11-16, 18, 27-29, 36, and 38-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 5 recites "A system comprising an input interpreter ... capable of at least partially designing at least the machine of claim 1."

- It is unclear if the claimed system is the same as the machine of claim 1 or if the claimed system is not the same as the machine of claim 1.
- It is unclear if the system actually is used to design the machine of claim 1, or if it is merely theoretically capable of at least partially designing at least the machine of claim 1.
- **It is unclear if it is necessary to actually possess the invention of claim 1 in order to have the system of claim 5.** It appears that the system of claim 5 merely is capable of at least partially

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designing at least" a machine with any of the characteristics of a computing machine such as the one claimed in claim 1 and does not necessitate actually possessing the machine of claim 1. This means that claim 5 is met by any computer system, since any computer system should be capable of at least partially designing a computing machine.

- 5
- It is unclear how the system of claim 5 would accomplish "at least partially designing at least the machine of claim 1", if it were to actually be used to at least partially design such a machine.
 - **Examiner suggests that this claim be written in independent form to clearly delineate the required limitations.**
- 10
- Claim 6 recites the limitation "The machine of claim 5" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 5 is directed to a system capable of at least partially designing at the machine of claim 1. It is unclear if the "machine of claim 5" in claim 6 refers to the system of claim 5, the machine of claim 1, or simply lacks antecedent basis.
 - Claim 8 recites "A system comprising the machine of claim 1 and an output interpreter ...".
 - It is unclear whether the output interpreter is part of the machine of claim 1 or if the output
 - 15 interpreter is external to the machine of claim 1.
 - It is unclear if the claimed system is the same as the machine of claim 1, or if the claimed system is not the same as the machine of claim 1.
 - **It is unclear if it is necessary to actually possess the invention of claim 1 in order to have the system of claim 8.**
- 20
- It is unclear whether the system is actually used to translate firing activity of a subset of Effectors or if it is merely theoretically capable of such a translation.
 - It is unclear how the interpreter would translate firing activity of a subset of Effectors, if it were to actually perform such a translation.
 - **Examiner suggests that this claim be written in independent form to clearly delineate the**
 - 25 **required limitations.**
- 30
- Claim 11 recites: "... the machine is capable of running a Meta program ...".
 - It is unclear the machine is actually used to run a Meta program or if it is merely theoretically capable of running such a program.

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- It is unclear what qualities and characteristics the machine would necessarily need to possess in order to run a Meta program, if it actually were used to run such a program.
- Claim 12 recites: "... said machine architecture comprises hardware having a predetermined error tolerance."
- 5 ○ It is unclear if the hardware is designed to enforce an error tolerance or if the hardware is built to have specifications within an error tolerance.
- It is unclear what kind of "error" the tolerance directed to limiting.
- Claim 13 recites: "... the hardware includes transistors configured to operate at subthreshold."
- It is unclear how the transistors are configured to operate in such a manner.
- 10 ○ It is unclear if there is some kind of voltage limiting or if operating at subthreshold is merely a consequence of efficient programming.
- Claim 14 recites "A method comprising designing the machine of claim 1 ...".
- **It is unclear if it is necessary to actually possess the machine of claim 1 in order to use the method of claim 14.** It appears that the method of claim 14 merely performs abstract graph manipulation and does not necessitate actually possessing the machine of claim 1.
- 15 ○ **Examiner suggests that this claim be written in independent form to clearly delineate the required limitations.**
- Claim 18 recites Input Effectors "... capable of receiving information from an external environment". It is unclear if the method requires that the Input Effectors actually receiving information from an external environment or merely that they are theoretically capable of performing such a task.
- 20 - Claim 27 recites: "... the dynamic machine is capable of running a Meta program ...".
- It is unclear the machine is actually used to run a Meta program or if it is merely theoretically capable of running such a program.
- It is unclear what qualities and characteristics the machine would necessarily need to possess in order to run a Meta program, if it actually were used to run such a program.
- 25 - Claim 28 recites: "... said machine architecture based on an error tolerance."
- It is unclear if the hardware is designed to enforce an error tolerance or if the hardware is built to have specifications within an error tolerance.

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- It is unclear what kind of "error" the tolerance directed to limiting.
- Claim 36 recites: "... information from a distinct Effector machine." It is unclear if this means 'an Effector machine other than the Effector machine containing said Effectors' or 'an Effector machine distinguished by some characteristic or quality'.
- 5 - Claim 38 recites Effectors "... capable of being configured to receive their information ...". It is unclear if the method requires that the Effectors actually receive information or merely that they are theoretically capable of being configured to perform such a task.
- Claim 38 recites: "...distinct Effector machine." It is unclear if this means 'an Effector machine other than the Effector machine containing said Effectors' or 'an Effector machine distinguished by some characteristic or quality'.
- 10 - Claim 47 recites "A system comprising an input interpreter ... capable of at least partially designing at least a Static program for the machine of claim 1."
 - It is unclear if the claimed system is the same as the machine of claim 1 or if the claimed system is not the same as the machine of claim 1.
 - 15 ○ It is unclear if the system actually is used to design at least a program for the machine of claim 1, or if it is merely theoretically capable of at least partially designing at least such a program.
 - **It is unclear if it is necessary to actually possess the invention of claim 1 in order to have the system of claim 47.** It appears that the system of claim 47 is merely capable of at least partially designing a program and does **not** necessitate actually possessing the machine of claim 1.
 - 20 Any computer should meet the limitations of this claim.
 - It is unclear how the system of claim 47 would accomplish "at least partially designing at least a Static program for the machine of claim 1", if it were to actually be used to at least partially design at least such a program.
 - **Examiner suggests that this claim be written in independent form to clearly delineate the required limitations.**
 - 25 - Claim 48 recites "A system comprising an input interpreter ... capable of at least partially designing at least a Meta program for the machine of claim 1."

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- It is unclear if the claimed system is the same as the machine of claim 1 or if the claimed system is not the same as the machine of claim 1.
- It is unclear if the system actually is used to design at least a program for the machine of claim 1, or if it is merely theoretically capable of at least partially designing at least such a program.
- 5 ○ **It is unclear if it is necessary to actually possess the invention of claim 1 in order to have the system of claim 48.** It appears that the system of claim 48 is merely capable of at least partially designing a program and does not necessitate actually possessing the machine of claim 1. Any computer should meet the limitations of this claim.
- 10 ○ It is unclear how the system of claim 48 would accomplish "at least partially designing at least a Meta program for the machine of claim 1", if it were to actually be used to at least partially design at least such a program.
- **Examiner suggests that this claim be written in independent form to clearly delineate the required limitations.**

- Claim 49 recites: "... the machine is capable of running a Meta program ...".

- 15 ○ It is unclear the machine is actually used to run a Meta program or if it is merely theoretically capable of running such a program.
- It is unclear what qualities and characteristics the machine would necessarily need to possess in order to run a Meta program, if it actually were used to run such a program.

- Claim 50 recites Effectors "... capable of receiving information from a distinct Effector machine".

- 20 ○ It is unclear if the method requires that the Effectors actually receive information from a distinct Effector machine or merely that they are theoretically capable of performing such a task.
- It is unclear if "distinct Effector machine" means 'an Effector machine other than the Effector machine containing said Effectors' or 'an Effector machine distinguished by some characteristic or quality'.

25 - Claim 51 recites Effectors "... capable of receiving information from a Static program". It is unclear if the method requires that the Effectors actually receive information from a Static program or merely that they are theoretically capable of performing such a task.

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- Claim 52 recites Effectors "... capable of receiving information from a Meta program". It is unclear if the method requires that the Effectors actually receive information from a Meta program or merely that they are theoretically capable of performing such a task.
- Claim 53 recites Input Effectors "... capable of receiving information from an external environment; ... a distinct Effector machine; ... a Static program; and ... a Meta program".
 - o It is unclear if the method requires that the Effectors actually receive information from each listed source or merely that they are theoretically capable of performing such a task.
 - o It is unclear if "distinct Effector machine" means 'an Effector machine other than the Effector machine containing said Effectors' or 'an Effector machine distinguished by some characteristic or quality'.
- Claim 54 recites: "... the dynamic machine is capable of running a Meta program ...". It is unclear if the method requires that the machine actually run Meta program or merely that they are theoretically capable of performing such a task.
- Claim 55 recites: "... the dynamic machine is capable of running a Meta program ...". It is unclear if the method requires that the machine actually run Meta program or merely that they are theoretically capable of performing such a task.
- Claim 56 recites: "... the dynamic machine is capable of running a Meta program ...". It is unclear if the method requires that the machine actually run Meta program or merely that they are theoretically capable of performing such a task.
- Claim 57 recites: "... the dynamic machine is capable of running a Meta program ...". It is unclear if the method requires that the machine actually run Meta program or merely that they are theoretically capable of performing such a task.
- Claim 58 recites: "... the dynamic machine is capable of running a Meta program ...". It is unclear if the method requires that the machine actually run Meta program or merely that they are theoretically capable of performing such a task.
- The term "at least partially" in claims 5, 14, 47, and 48 is a relative term which renders the claim indefinite. The term "at least partially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of

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the scope of the invention. It is not clear to what extent the claim requires the task to be performed. "At least partially" could be interpreted to mean any trivially miniscule portion of the recited task, such as opening a file, changing a single value, or saving a file in an appropriate output.

- Claims 15-16, 29, and 39-46 are rejected due to their dependence on rejected claims since they do not overcome the outstanding rejections.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States:

Claims 1, 5, 17, and 47-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomita (USPN 6,049,793).

Claims 1 and 17:

Tomita anticipates:

- a collection of computing elements (C1-25 especially "neurons" C5:10-20; *Calling the computing elements "Effectors" is simply labeling them and constitutes merely non-functional descriptive material which does not affect patentability*); and
- a machine architecture that determines how the computing elements behave and determines how information is transmitted from one computing element to another computing element (C1-25 especially C5:10-55).

Claim 5:

Tomita anticipates:

- an input interpreter, the input interpreter being capable of at least partially designing at least a computing machine (C1-25 especially "system for building ... based on pre-arranged input data" C5:10-25 and "system ... for building an artificial neural network of artificial neurons on a computer using input data

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representing patterns of different classes of signals in which a programmed computer analyzes the input data" C5:25-55) comprising:

- o a collection of computing elements (C1-25 especially "neurons" C5:10-20; *Calling the computing elements "Effectors" is simply labeling them and constitutes merely non-functional descriptive material which does not affect patentability*); and
- o a machine architecture that determines how the computing elements behave and determines how information is transmitted from one computing element to another computing element (C1-25 especially C5:10-55).

10 **Claim 47:**

Tomita anticipates:

- an input interpreter, the input interpreter being capable of at least partially designing at least a Static program for a computing machine (C1-25 especially "system for building ... based on pre-arranged input data" C5:10-25 and "system ... for building an artificial neural network of artificial neurons on a computer using input data representing patterns of different classes of signals in which a programmed computer analyzes the input data" C5:25-55) comprising a collection of computing elements (C1-25 especially "neurons" C5:10-20; *Calling the computing elements "Effectors" is simply labeling them and constitutes merely non-functional descriptive material which does not affect patentability*) and a machine architecture that determines how the computing elements behave and determines how information is transmitted from one computing element to another computing element (C1-25 especially C5:10-55). *It would be clear to the person of ordinary skill in the art that any computer would be capable of at least partially designing such a program for a computing machine such as the one claimed.*

Claim 48:

25 Tomita anticipates:

- an input interpreter, the input interpreter being capable of at least partially designing at least a Meta program for a computing machine (C1-25 especially "system for building ... based on pre-arranged input data" C5:10-25 and "system ... for building an artificial neural network of artificial neurons on a computer

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using input data representing patterns of different classes of signals in which a programmed computer analyzes the input data" C5:25-55) comprising a collection of computing elements (C1-25 especially "neurons" C5:10-20; *Calling the computing elements "Effectors" is simply labeling them and constitutes merely non-functional descriptive material which does not affect patentability*) and a machine architecture that determines how the computing elements behave and determines how information is transmitted from one computing element to another computing element (C1-25 especially C5:10-55). *It would be clear to the person of ordinary skill in the art that any computer would be capable of at least partially designing such a program for a computing machine such as the one claimed.*

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Feldgajer (USPN 5,832,466)
- Grichnik (USPN 6,256,619)
- Ng (USPN 6,470,261)
- Schaffer (USPN 6,601,053)
- Schaffer (USPGP 2003/0212645)
- Lindgren ("Regular Language Inference Using Evolving Neural Networks")
- Elias ("Genetic Generation of Connection Patterns for a Dynamic Artificial Neural Network")
- Dasgupta ("Designing Application-Specific Neural Networks using the Structured Genetic Algorithm")
- Schaffer ("Combinations of Genetic Algorithms and Neural Networks: A Survey of the State of the Art")

Claims 1, 2, 5, 6, 8-18, 21, 23-29, 31, 32, and 34-58 are rejected.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Buss whose telephone number is 571-272-5831. The examiner can normally be reached on M-F 9AM-5PM.

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As detailed in MPEP 502.03, communications via Internet e-mail are at the discretion of the applicant. Without a written authorization by applicant in place, the USPTO will not respond via Internet e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35 U.S.C. 122. A paper copy of such correspondence will be placed in the appropriate patent application. The following is a sample authorization form which may be used by applicant:

"Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin Buss
Examiner
Art Unit 2129

David Vincent 12/11/06
DAVID VINCENT
SUPERVISORY PATENT EXAMINER